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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,700	04/27/2001	Arun Shah	68110328.710	9543

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BAKER & MCKENZIE
PATENT DEPARTMENT
2001 ROSS AVENUE
SUITE 2300
DALLAS, TX 75201

EXAMINER

HWANG, JOON H

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,700

Applicant(s)

SHAH ET AL.

Examiner

Joon H. Hwang

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The applicants amended claims 1, 3-6, 8-12, and 14 in the amendment received on 7/13/04.

The pending claims are 1, 3-6, and 8-16.

Response to Arguments

2. Applicant's arguments with respect to claim 11 have been considered but are moot in view of the new ground(s) of rejection.

The applicants added in claim 11 the limitation of the star having an associated flag for indicating availability of the star. The limitation is addressed in the following rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3-6, and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the associated aggregated fact tables of the selected particular star.

The last limitations in claims 1 and 6, "querying the associated aggregated fact tables comprising the aggregated facts" have no relations to previous steps that involve

providing, comparing, evaluating, and selecting a particular star in a stargroup comprising one or more stars. Thus, there should be a relation between the last limitations and the previous limitations for making the claims clear.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman et al. (U.S. Patent No. 6,212,524) in view of Rogers (U.S. Patent No. 6,212,515).

With respect to claim 11, Weissman discloses calculating a measure in a database having a plurality of stars (aggregate tables, lines 9-20 in col. 8 and lines 38-48 in col. 5). Weissman discloses a star schema comprising a fact table and a table for each supported dimension (lines 26-39 in col. 2). Weissman discloses a memory means for storing data (lines 37-46 in col. 6). Weissman discloses storing a name and key of an aggregate, teaching a star identifier identifying a star (an aggregate) associated with a particular fact table (fig. 3 and line 54 in col. 15 thru line 56 in col. 16). Weissman discloses a constellation flag (a star flag), which teaches the availability of the star (line 60 in col. 31 thru line 11 in col. 32). Weissman does not explicitly disclose an array of dimension indicators. However, Rogers further discloses a physical partition (an aggregate table) containing levels of each dimension, which are aggregated (lines 1-25 in col. 3) for selecting an appropriate aggregate fact table. Roger further discloses

Art Unit: 2162

a dimension hierarchy for each dimension could be represented as an array (lines 42-46 in col. 4). Therefore, based on Weissman in view of Rogers, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Weissman with the teaching of Rogers for the array of dimension indicators in order to aggregate dimensions at a level for an appropriate aggregate fact table.

Weissman further disclose a flag for

With respect to claim 12, Rogers further discloses a physical partition (an aggregate table) containing levels of each dimension, which are aggregated (lines 1-25 in col. 3) for selecting an appropriate aggregate fact table. Therefore, the limitations of claim 12 are rejected in the analysis of claim 11, and the claim is rejected on that basis.

With respect to claim 13, Roger further discloses an indication of a particular level of a dimension, which teaches a dimension indicator (lines 3-25 in col. 3) for selecting an appropriate aggregate fact table. Therefore, the limitations of claim 13 are rejected in the analysis of claim 12, and the claim is rejected on that basis.

With respect to claim 14, Weissman discloses a constellation (a stargroup) associated with the measure, wherein the constellation (the stargroup) comprising one or more stars (aggregates) associated with fact tables (fig. 7, fig. 30, lines 36-40 in col. 3, lines 9-26 in col. 14, lines 15-42 in col. 31, lines 20-63 in col. 33, lines 19-54 in col. 35, line 24 in col. 13 thru line 56 in col. 16, lines 25-48 in col. 17, lines 14-67 in col. 27, and line 65 in col. 28 thru line 8 in col. 29). Roger further discloses a dimension hierarchy for each dimension could be represented as an array (lines 42-46 in col. 4).

Therefore, the limitations of claim 14 are rejected in the analysis of claim 11 above, and the claim is rejected on that basis.

With respect to claim 15, Weissman discloses storing stars (aggregates) based on the degree of aggregation of the first aggregate fact tables associated therewith (fig. 7, figs. 13-15, line 52 in col. 15 thru line 56 in col. 16, and fig. 3).

With respect to claim 16, the limitations of claim 16 are similar to the limitations of claim 14 above. Furthermore, Weissman discloses multiple constellations (multiple stargroups, lines 9-26 in col. 14 and fig. 7). Therefore, the limitations of claim 16 are rejected in the analysis of claim 14 above, and the claim is rejected on that basis.

Allowable Subject Matter

7. Claims 1, 3-6, and 8-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 1 and 6 identify the distinct features, providing a flag with at least one star of the plurality of stars, each flag indicating the availability of its associated star, selecting a stargroup associated with the measure, the stargroup comprising one or more stars, comparing one or more dimensions indicators of the one or more stars of the selected stargroup to one or more requested levels of aggregation, evaluating the availability of the one or more stars of the selected stargroup by reviewing their associated flags, selecting a particular star of the one or more stars based on the comparison of the one or more dimension indicators to the one or more requested levels of aggregation and the evaluation of the availability of the one or more stars, and

Art Unit: 2162.

querying the associated aggregated fact tables comprising the aggregated facts. The closest prior art, Weissman et al. (U.S. Patent No. 6,212,515) disclosing a star schema with fact tables and dimension tables for a data analysis, fails to suggest the claimed limitations as mentioned above in combination with other claimed elements.

Claims 3-5 and 8-10, further depending from one of claims 1 and 6, are objected with the same reason above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571-272-4107. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Joon Hwang
11/12/2004



JEAN M. CORRIELLUS
PRIMARY EXAMINER